KAPSABET HIGH SCHOOL

231/3

Paper 3

(*Kenya Certificate of Secondary Education*)

INTERNAL MOCK EXAM

BIOLOGY

Dec. 2020– 1 ¾ Hours

Name..... **Index No.** .....

Adm No..... **Date:**.....

Signature ..... **Stream :**.....

Instructions to candidates

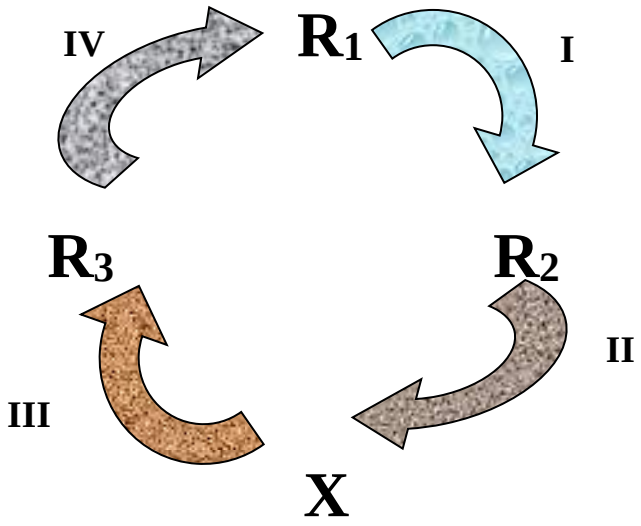
a) *Write your Name, Index, Admission number and stream in the spaces provided above.*
b) *Sign and write the examination date on the spaces provided above.*
c) *Answer all questions in the spaces provided in the question paper.*
d) *All workings must be clearly shown where necessary.*
e) *You are required to spend the first 15 minutes of 1 ¾ hours allowed for this paper reading the whole paper before commencing your work.*
f) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
g) Candidates must answer the questions in English.

For Examiners use only

Question	Maximum Score	Candidate's Score
1	13	
2	17	
3	10	
Total Score	40	

1. You are provided with specimens **R_1, R_2** and **R_3** representing different stages of plant development. Study the specimen carefully and answer questions relating to them.

a). The chart below shows relationship between the specimens.



i) Identify the process labeled **I** **(1 Mark)**

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……..……..

ii) State one **internal** and one **external** conditions necessary for the process identified in i) above. **(2Marks)**

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iii) Name the

Stage of development **R_2** **(1Mark)**

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……..…..

Process immediately before R_3 in process III **(1 Mark)**

……..……

……..

b). Dissect specimen R3 longitudinally and open it out.

i) Make a drawing of the section and label it **(5Marks)**

ii) Describe two adaptations of the specimen to is functions **(4Marks)**

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2. Specimens **U** and **W** have been obtained from different plants.

a). i) Observe the leaves and differentiate them in reference to the following characteristics;

(2 Marks)

a) **M**

a	U	W
r i) Shape **k**		
s ii) Texture **)**		

ii) Using apparatus and materials provided, determine the average surface area of each leaf.

(4Marks)

Leaf **U**	Leaf **W**

iii) c). i) Draw **two** 1cm^2 squares across the midribs of each the four leaves, two of each **U** and **W.**

ii) Add some warm water to fill two thirds of a boiling tube.

ii) Insert one of leaves U, rolled, with the lower surface facing outward.

iii) Immediately begin counting the bubbles released on lower surface, within the two squares for 1 minute.

iv) Repeat the procedures i) – iii) for the second leaf **U**

v) Repeat the procedure for the two leaves **W**

vi). Record your results in the table below **(4Marks)**

Leaf		Number of bubbles on Lower surface	Average for the marked area.
U	1		
	2		
W	1		
	2		

vii) Comment on the observation made on the upper surfaces of the two types of leaves

(1 Mark)

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d) Calculate the average number of bubbles per cm^2 for each leaf type. **(4Marks)**

i) Leaf type U

ii) Leaf type W

e) i)Deduce a suitable habitat for plant type W **(1Mark)**

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ii) Give a reason for your answer **(1Mark)**

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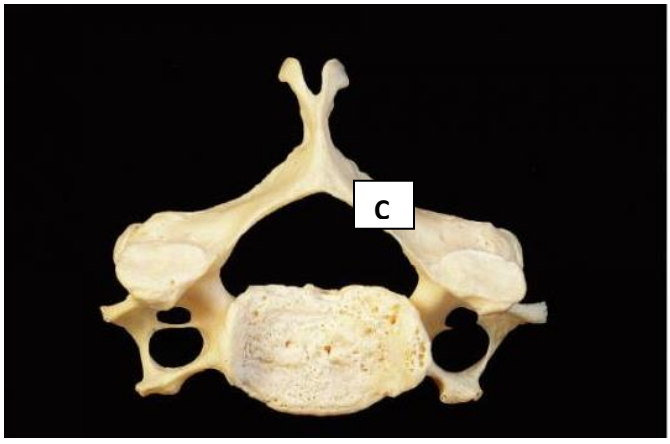
3. The photos provided for this question are of bones **P** and **S** from the same mammal. **P_1** and **P_2** are photos of the same bone from different views. Study the photographs and answer the questions that follow.

P_1

P_2

S



a) Identify the bones in the photos. Give a reason for each your answers. **(4 Marks)**

i) P

……

……

ii)

S……

……

b) Name the parts labeled A, B and C **(3 Marks)**

i) ……..

ii) …….

iii) ……..……..

c) What view of the bone is presented in photo **P_2?** **(1 Mark)**

…….

d) Identify one **similarity** and one **difference** between bones P and S **(2 Marks)**

i) Similarity

……

……..……

……..

ii) Difference

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END